

CLAIMS

1. A method for measuring molecular movement in a cell, comprising contacting a cell with a compartment marker and with a molecular marker, imaging the marked cell with a detector, creating a compartment mask, and correlate said compartment mask and said molecular marker to measure molecular movement in a cell.

2. The method of claim 1 wherein there is relative motion between the cell and the detector.

3. The method of claim 1 wherein the molecular marker is a fluorescent labeled antibody.

4. The method of claim 1 wherein the compartment marker is a fluorescent molecule.

5. The method of claim 1 wherein the compartment is nucleus, cytoplasm, or membrane.

6. The method of claim 1 wherein the molecule marked is NF- κ B.

7. The method of claim 1 further comprising the step of inducing molecular movement in the cell.

8. The method of claim 7 wherein the induced molecular movement is nuclear translocation.

9. The method of claim 7 wherein the molecular movement is induced with LPS or IL-1 β / TNF- α .

10. A method for measuring nuclear translocation in a cell, comprising contacting a cell with a nuclear marker and with a molecular marker, imaging the marked cell with a detector, creating a nuclear mask, and correlate said nuclear mask and said molecular marker to measure molecular movement in a cell.

11. The method of claim 10 wherein there is relative motion between the cell and the detector.

12. The method of claim 10 further comprising the step of inducing molecular movement in the cell.

13. The method of claim 12 wherein the induced molecular movement is nuclear translocation.

14. The method of claim 12 wherein the molecular movement is induced with LPS or IL-1 β / TNF- α .

15. The method of claim 10 wherein the nuclear marker is 7-AAD.

16. The method of claim 10 wherein the molecule marked is NF- κ B.

17. The method according to any one of claims 1-16 wherein the images are collected simultaneously.

18. The method according to any one of claims 1-16 wherein the detector is a time delay integration charge-coupled detector.